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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force										Date: February 2016		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0207171F / F-15 EPAWSS							
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	0.000	180.681	256.669	0.000	256.669	194.843	204.972	201.119	148.034	Continuing	Continuing
657108: EPAWSS DEVELOPMENT	-	0.000	180.681	256.669	0.000	256.669	194.843	204.972	201.119	148.034	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Program MDAP/MAIS Code: 485												
Note In FY 2016, PE 0207171F, F-15 EPAWSS, Project 676038, EPAWSS, Budget Activity 07, Operational Systems Development was transferred to PE 0207171F, F-15 EPAWSS, Project 657108, EPAWSS Development, Budget Activity 05, System Development and Demonstration to align the program in the correct budget activity. In FY 2015, PE 0207134F, F-15E Squadrons, Project 670131, Initial Operational Test and Evaluation, F-15 EPAWSS development efforts were transferred to PE 0207171F, F-15 EPAWSS, Project 676038, EPAWSS in order to provide budget transparency. Prior Years funding in FY 2013 and FY 2014 of \$14.677M was executed in PE 0207134F. Prior Year funding in FY 2015 of \$38.944M was executed in PE 0207171F, Project 676038.												
A. Mission Description and Budget Item Justification The F-15 is the most versatile fighter in the world today. The F-15C continues to provide air superiority with an undefeated and unmatched aerial combat record. The F-15E retains this air superiority capability and adds systems, such as advanced imaging and targeting systems, to meet the requirement for all-weather, deep penetration, and night / under-the-weather, air-to-surface attack. A mainstay in operations both domestic and abroad, upgrades to the F-15 (avionics, armament, airframe and engines) are critical to maintaining combat viability (lethality, survivability and supportability). Projected to remain in service past 2040, avionics modernization is key to long-term weapon system viability. This modernization is built on a foundation of technical and acquisition support studies (both internal to the Air Force and through outside contractors). The proliferation of fourth generation enemy aircraft, sophisticated "double-digit" anti-aircraft missile systems and other enemy systems pose a significant threat to F-15 survivability. The F-15 Eagle Passive Active Warning and Survivability System (EPAWSS) will replace the F-15's functionally obsolete self-defense Tactical Electronic Warfare System (TEWS) to enhance weapon system situational awareness and survivability against enemy threats. F-15 EPAWSS will also improve reliability and sustainability. F-15 EPAWSS is linked to an aircraft operational flight program update schedule that works to integrate new capabilities with the airframe. Incorporation of corresponding spiral and / or phased technology / equipment improvements that include support equipment, mission planning systems, and training device upgrades will improve performance, supportability and aircrew training. The F-15 EPAWSS upgrade will significantly improve the F-15's capability to autonomously and automatically detect, identify and locate radio frequency (RF) threats as well as provide the ability to deny, degrade, deceive, disrupt and defeat RF and electro-optical / infrared (EO / IR) threat systems in contested and unplanned operations												

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within highly contested environments through 2040. The F-15 EPAWSS will provide indication, type and position of ground-based RF threats as well as the indication, type and bearing of airborne threats with the situational awareness needed to avoid, engage or negate the threat. The F-15 EPAWSS will prevent RF and IR threat systems from detecting or acquiring accurate targeting information prior to threat engagement to complicate and / or negate an enemy threat targeting solution--and effectively counter enemy missiles / weapons if adversary threat systems engage and employ weapons against friendly forces--through components such as chaff, flares, decoys / angle countermeasures and jamming.						
Increment 1 replaces the obsolete TEWS. Increment 2 adds a towed decoy/angled countermeasure capability.						
This program is in Budget Activity 5, System Development and Demonstration, because it has passed Milestone A approval, is conducting technical maturation and risk reduction, and has been approved to release the Request for Proposal for engineering and manufacturing development activities.						
B. Program Change Summary (\$ in Millions)		FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget		0.000	186.481	214.428	0.000	214.428
Current President's Budget		0.000	180.681	256.669	0.000	256.669
Total Adjustments		0.000	-5.800	42.241	0.000	42.241
• Congressional General Reductions		0.000	0.000			
• Congressional Directed Reductions		0.000	-5.800			
• Congressional Rescissions		0.000	0.000			
• Congressional Adds		0.000	0.000			
• Congressional Directed Transfers		0.000	0.000			
• Reprogrammings		0.000	0.000			
• SBIR/STTR Transfer		0.000	0.000			
• Other Adjustments		0.000	0.000	42.241	0.000	42.241
Change Summary Explanation						
FY2016 Funding decreased -\$5.800M because of a congressional mark						
FY2017 increase of \$42.241M to fully fund EPAWSS Inc 1						
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Eagle Passive/Active Warning Survivability System (EPAWSS)		0.000	180.681	256.669	0.000	256.669
Description: Planned replacement of the existing F-15 self-protection, Tactical Electronic Warfare System (TEWS). This includes technical and acquisition- related studies.						
FY 2015 Accomplishments:						

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C. Accomplishments/Planned Programs (\$ in Millions)											
					FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total		
N/A											
FY 2016 Plans: Completed Increment 1 TMRR PDR-level design to support Milestone B decision. Refined design for FY17 CDR. Continued acquisition planning for EMD and Milestone B. Awarded and executed EMD development and test contract for Increment 1. This includes technical and acquisition-related studies.											
FY 2017 Base Plans: Complete Increment 1 TMRR CDR-level design. Continue acquisition planning for Milestone C. Continue execution of EMD. Produce EMD test assets. Execute risk reduction, development test activities, and continue acquisition and technical-related studies for Increments 1 and 2.											
FY 2017 OCO Plans: N/A											
Accomplishments/Planned Programs Subtotals					0.000	180.681	256.669	0.000	256.669		
D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• APAF: BA05: Line Item # F15EWS: <i>Aircraft Modification</i>	0.000	0.000	0.000	0.000	0.000	0.000	276.560	255.744	406.435	3,861.190	4,799.940
• APAF: BA07: Line Item #000999: <i>Aircraft Spares and Repair Parts</i>	0.000	0.000	0.000	0.000	0.000	0.000	4.070	4.880	9.340	193.820	212.110
• RDT&E: BA07: PE0207171F: <i>F-15 EPAWSS BA07</i>	38.944	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	38.944
Remarks FY 19 - FY 21 funding is for F-15 C & F-15 E Procurement.											
E. Acquisition Strategy The MDA approved acquisition approach is to design a solution that leverages mature non-developmental components that integrate into the existing footprint on the F-15 aircraft left behind by the legacy F-15 electronic warfare system. To further improve schedule, affordability and program risk outcomes, and consistent with the JROC approved CDD, the F-15 EPAWSS program will pursue a two-increment acquisition approach. Increment 1 replaces the existing Radar Warning Receiver, Internal Countermeasures System and Countermeasures Dispenser System. Increment 2 adds a towed decoy / angle countermeasure capability.											

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PE 0207171F: *F-15 EPAWSS*
Air Force

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0207171F / F-15 EPAWSS	Project (Number/Name) 657108 / EPAWSS DEVELOPMENT
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Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
F-15 EPAWSS TMRR	SS/ Various	Boeing : St. Louis, MO	-	0.000		97.404	Feb 2016	43.806	Oct 2016	0.000		43.806	Continuing	Continuing	177.341
F-15 EPAWSS EMD	SS/ Various	Boeing : St. Louis, MO	-	0.000		62.160	Sep 2016	163.992	Nov 2016	0.000		163.992	Continuing	Continuing	477.000
F-15 EPAWSS	Various	Various : Various	-	0.000		19.721	Feb 2016	47.068	Dec 2017	0.000		47.068	Continuing	Continuing	199.895
Subtotal			-	0.000		179.285		254.866		0.000		254.866	-	-	854.236

Remarks

FY16PB- EPAWSS efforts were transferred from Budget Activity 7, Operational Systems Development, PE 0207171F, Project Number 676038 to Budget Activity 5, Engineering and Manufacturing Development, PE 0207171F, Project Number 657108 per OSD direction. The individual program reference to "various" contract methods addresses other government costs for trainers, test, hardware, special studies, etc., that are required to meet F-15 EPAWSS program objectives. The execution vehicles between these DoD entities vary by effort.

Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	-

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	-

Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support Costs	Various	Various : Various	-	0.000		1.396	Jan 2016	1.803	Dec 2016	0.000		1.803	Continuing	Continuing	40.655
Subtotal			-	0.000		1.396		1.803		0.000		1.803	-	-	40.655

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force												Date: February 2016		
Appropriation/Budget Activity 3600 / 5						R-1 Program Element (Number/Name) PE 0207171F / <i>F-15 EPAWSS</i>				Project (Number/Name) 657108 / <i>EPAWSS DEVELOPMENT</i>				

Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks The individual program reference to "various" contract methods addresses other government costs for trainers, test, hardware, special studies, etc. that are required to meet F-15 EPAWSS program objectives. The execution vehicles between these DoD entities vary by effort.															
			Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	0.000		180.681		256.669		0.000		256.669	-	-	894.891
Remarks Prior Years funding in FY 2013 and FY 2014 of \$14.677M was executed in PE 0207134F. Prior Year funding in FY 2015 of \$38.944M was executed in PE 0207171F, Project 676038.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Air Force	Date: February 2016
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Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0207171F / <i>F-15 EPAWSS</i>	Project (Number/Name) 657108 / <i>EPAWSS DEVELOPMENT</i>
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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
EPAWSS MS A																												
EPAWSS TMRR Contract Award																												
EPAWSS MS B																												
EPAWSS EMD Contract Award																												
EPAWSS MS C																												
EPAWSS Production Contract Award																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force			Date: February 2016
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0207171F / <i>F-15 EPAWSS</i>	Project (Number/Name) 657108 / <i>EPAWSS DEVELOPMENT</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
EPAWSS MS A	4	2015	4	2015
EPAWSS TMRR Contract Award	4	2015	4	2015
EPAWSS MS B	4	2016	4	2016
EPAWSS EMD Contract Award	4	2016	4	2016
EPAWSS MS C	2	2019	2	2019
EPAWSS Production Contract Award	3	2019	4	2021